

Form PTO-1390		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER P20914	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <div style="font-size: 1.5em; font-weight: bold; text-align: center;">09/807993</div>	
INTERNATIONAL APPLICATION NO. PCT/DE00/00046		INTERNATIONAL FILING DATE 5 January 2000		PRIORITY DATE CLAIMED 15 January 1999	
TITLE OF INVENTION CIRCUIT ARRANGEMENT FOR FORMING THE TERMINATION OF AN ANALOG SUBSCRIBER LINE					
APPLICANT(S) FOR DO/EO/US Joerg HAUPTMANN and Alexander KAHL					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information.					
<ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to promptly begin national examination procedures (35 U.S.C. 371(f)).</li> <li>4. <input checked="" type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (PCT Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))               <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)).</li> <li>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))               <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). "Unexecuted"</li> <li>10. <input type="checkbox"/> An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (U.S.C. 371(c)(5)).</li> </ol>					
<b>Items 11 to 16 below concern other document(s) or information included:</b>					
<ol style="list-style-type: none"> <li>11. Assignee; <u>INFINEON TECHNOLOGIES AG of München, GERMANY</u></li> <li>12. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>13. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>14. <input checked="" type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input type="checkbox"/> A change of power of attorney and/or address letter.</li> <li>17. <input type="checkbox"/> Figure of Drawing to be published _____</li> <li>18. <input checked="" type="checkbox"/> Other items or information:                Cover Sheet and International Application as published in German.                PCT/IPEA/416(in German).                PCT/IPEA/409(in German).                PCT/ISA/210(in English and German).                Cover Letter under 35 USC 371 and 1.495.                Claim of Priority.             </li> </ol>					

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)  
**09/807993**

INTERNATIONAL APPLICATION NO.  
PCT/DE00/00046

ATTORNEY'S DOCKET NUMBER  
P20914

19. The following fees are submitted:

Basic National Fee (37 CFR 1.492(a)(1)-(5)):

Search report has been prepared by the EPO or JPO. . . . . \$ 860.00

International preliminary examination fee paid to USPTO (37 CFR 1.482). . . . . \$ 690.00

No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO(37 CFR 1.445(a)(2)). . . . . \$ 710.00

Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO. . . . . \$1,000.00

International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4). . . . . \$ 100.00

ENTER APPROPRIATE BASIC FEE AMOUNT =

CALCULATIONS

PTO USE ONLY

\$860.00

Surcharge of \$130.00 for furnishing the oath or declaration later than 20 30 months from the earliest claimed priority date (37 CFR 1.492(e)).

\$

Claims	Number Filed	Number Extra	RATE		
Total Claims	5 - 20 =	0	X \$18.00	\$0.00	
Independent Claims	1 - 3 =	0	X \$80.00	\$0.00	
Multiple dependent claim(s) (if applicable)			+ \$270.00	\$0.00	

TOTAL OF ABOVE CALCULATIONS =

\$860.00

Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.

\$

SUBTOTAL =

\$860.00

Processing fee of \$130.00 for furnishing the English translation later than 20 30 months from the earliest claimed priority date (37 CFR 1.492(f)).

+

Extension of Time fee in the amount of \$

TOTAL NATIONAL FEE =

\$860.00

Fee for recording the enclosed assignment (37 CFR 1.21(h). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property

+

TOTAL FEES ENCLOSED =

\$860.00

Amount to be refunded

\$

Charged

\$

a. ☒ A check in the amount of \$860.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ to cover the above fees.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 19-0089.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO CUSTOMER NO. 7055  
AT THE PRESENT ADDRESS OF:

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NAME

29,027  
REGISTRATION NUMBER

P20914.A01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : J. HAUPTMANN et al.

Serial No : Not Yet Assigned (National Stage of PCT/DE00/00046)

Filed : Concurrently Herewith (International Filing Date January 5, 2000)

For : CIRCUIT ARRANGEMENT FOR FORMING THE TERMINATION OF  
AN ANALOG SUBSCRIBER LINE

**PRELIMINARY AMENDMENT**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Prior to calculation of the filing fees and the examination of the above-identified patent application on the merits, the Examiner is respectfully requested to amend the claims as follows:

IN THE CLAIMS

Please amend claims 1-4 as follows (a marked-up copy of the claim amendments is provided as an attachment to this Amendment):

1. (Amended-Clean Text) A circuit arrangement for forming the termination of an analog subscriber line which has a first connection and a second connection for the subscriber line, and where the first connection is connected to the second connection by a

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series circuit comprising a first capacitor, at least one variable resistor and a second capacitor, a DC source being connected to the node point between the first capacitor and the variable resistor.

2. (Amended-Clean Text) The circuit arrangement as claimed in claim 1, wherein the DC source has a transistor and a resistor, the load path of the transistor being connected in series with the resistor, and the control connection of the transistor being set by a control circuit.

3. (Amended-Clean Text) The circuit arrangement as claimed in claim 2, wherein the control circuit has an operational amplifier whose output is connected to the control connection of the transistor of the DC source, whose negative input is connected to the junction point between the transistor and the resistor of the DC source and whose positive input has a reference voltage applied to it.

4. (Amended-Clean Text) The circuit arrangement as claimed in claim 2 wherein the DC source has a diode which is connected in series with the load path of the transistor.

Please add new claim 5 as follows:

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---5. The circuit arrangement as claimed in claim 3 wherein the DC source has a diode which is connected in series with the load path of the transistor.---

REMARKS

By the above amendment, claims 1-4 have been amended and claim 5 has been added so as to be placed in accepted U.S. format and to delete reference symbols and multiple dependency.

If there should be any questions, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,  
J. HAUPTMANN et al.

 *Reg. No.*  
Bruce H. Bernstein *33,329*  
Reg. No. 29,027

May 2, 2001  
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MARKED-UP COPY OF AMENDED CLAIMS

1. (Amended) A circuit arrangement for forming the termination of an analog subscriber line which has a first connection [(a)] and a second connection [(b)] for the subscriber line, and where the first connection [(a)] is connected to the second connection [(b)] by [means of] a series circuit comprising a first capacitor [(C1)], at least one variable resistor [(T1, R1, T2, R2)] and a second capacitor [(C2)], a DC source [(T3, R5, VDDA)] being connected to the node point [(1)] between the first capacitor [(C1)] and the variable resistor [(T1, R1)].

2. (Amended) The circuit arrangement as claimed in claim 1, wherein [characterized in that]  
the DC source [(T3, R5, VDDA)] has a transistor [(T3)] and a resistor [(R5)], the load path of the transistor being connected in series with the resistor, and the control connection of the transistor being set by a control circuit [(5)].

3. (Amended) The circuit arrangement as claimed in claim 2, wherein [characterized in that]  
the control circuit has an operational amplifier [(5)] whose output is connected to the control connection of the transistor [(T3)] of the DC source, whose negative input is connected to

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the junction point between the transistor [(T3)] and the resistor [(R5)] of the DC source and whose positive input has a reference voltage [(VREF)] applied to it.

4. (Amended) The circuit arrangement as claimed in claim 2 [or 3, characterized in that] wherein  
the DC source has a diode [(D1)] which is connected in series with the load path of the transistor [(T3)].

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JC18 Rec'd PCT/PTO 03 MAY 2001  
PCT/DE00/00046

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Description

Circuit arrangement for forming the termination of an analog subscriber line

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The invention relates to a circuit arrangement for forming the termination of an analog subscriber line in accordance with the precharacterizing clause of patent claim 1.

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A circuit arrangement for terminating an analog subscriber line (SLIC = Subscriber Line Circuit) at the subscriber end forms a terminal impedance for the subscriber line both for AC signals and for DC signals.

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In this context, the terminal impedance for DC signals (DC terminal impedance) and for AC signals (AC terminal impedance) is connected to the subscriber line when there is a connection for signal transmission.

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The DC terminal impedance is used to set an operating point for the circuit arrangement for terminating the analog subscriber line and to signal to a remote station (e.g. an exchange) that there is a connection.

When signals (e.g. voice or data signals) are

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transmitted or received, the current flowing through the subscriber line is then modulated by the operating point set by the DC terminal impedance. In this case, the operating point depends on the direct current, supplied by the remote station, which flows through the

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subscriber line and on the DC characteristic set by the DC terminal impedance.

The DC and AC terminal impedances can be changed or adjusted in line with country-specific requirements only by changing the circuitry, for example by replacing resistors, capacitors, etc.

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The technical problem on which the invention is based is therefore that of specifying a circuit arrangement

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for terminating an analog subscriber line which forms, with little circuit complexity, a controllable AC terminal impedance which is programmable, and where the subscriber line is free of direct current.

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This problem is achieved by a circuit arrangement having the features of patent claim 1. Advantageous embodiments of the invention can be found in the respective dependent claims.

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The invention relates to a circuit arrangement for forming the termination of an analog subscriber line which has a first connection and a second connection for connecting the two-wire analog subscriber line. The first connection is connected to the second connection by means of a series circuit comprising a first capacitor, at least one variable resistor and a second capacitor. According to the invention, a DC source is connected to the junction point between the first capacitor and the variable resistor. The DC source impresses a current which is used to set an operating point for signal transmission via the analog subscriber line. The first and the second capacitor mean that DC signals are blocked on the subscriber line, so that no direct current can flow through the analog subscriber line. In addition, a terminal impedance for AC signals is formed by means of the first and the second capacitor and the variable resistors. The variable resistors allow the operating point to be set for DC signals and allow the terminal impedance to be set for AC signals.

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In one preferred embodiment, the DC source is formed by a transistor and a resistor, the load path of the transistor being connected in series with the resistor, and the free connection of the resistor being connected to a supply voltage. The control connection of the transistor is connected to the junction point between

the load path of the transistor and the resistor by means of a control circuit.

In a particularly preferred embodiment, the control circuit for the DC source has an operational amplifier which compares the voltage at the junction point between the load path of the transistor and the resistor with a reference voltage and uses its output voltage to control the transistor on the basis of this.

Preferably, the DC source has a diode which is connected in series with the load path of the transistor. Advantageously, the diode prevents the transistor from becoming damaged by the high voltages of a call signal.

Other advantages, features and opportunities for application of the invention can be found in the description of illustrative embodiments below in conjunction with the drawing. In the drawing:

Figure 1 shows an illustrative embodiment of the circuit arrangement for terminating an analog subscriber line which is used in a module for data transmission via an analog subscriber line.

Figure 1 shows a circuit arrangement for terminating an analog subscriber line, where the analog subscriber line has two wires which can be connected to a first connection a and to a second connection b of the circuit arrangement.

The first connection a is connected to a reference-ground potential VSS via a series circuit comprising a first capacitor C1, a first n-channel MOSFET T1 and a first resistor R1. The second connection b is connected to the reference-ground potential VSS via a series circuit comprising a second capacitor C2, a second n-

channel MOSFET T2 and a second resistor R2. In this illustrative embodiment, the reference-ground potential VSS is equal to the zero potential. The first capacitor C1 and the second capacitor C2 block DC signals on the analog subscriber line. Hence, no direct current flows into the circuit arrangement via the subscriber line.

To set a DC operating point for the circuit arrangement, a voltage is measured at the junction point 1 between the first capacitor and the first n-channel MOSFET T1 using a first voltage divider R3 and R6 and is supplied to a DC operating point control circuit 3. In addition, a voltage is measured at the junction point 11 between the second capacitor C2 and the second n-channel MOSFET T2 using a second voltage divider R4 and R7 and is supplied to the DC operating point control circuit 3. The DC operating point control circuit 3 uses an adding circuit 4 and an analog integrator circuit 2 to control the resistance of the load path of the first n-channel MOSFET T1, and hence the DC operating point of the circuit arrangement.

So that measurable DC voltages are produced at the junction point 1 and the junction point 11, the junction point 1 is connected to a DC source which impresses a current I. The control connection of the second n-channel MOSFET T2 is at a high potential VHIGH in this operating state, which means that the resistance of the load path of the second n-channel MOSFET T2 has a low value.

The DC source for impressing the current I has a pnp bipolar transistor T3, a resistor R5 and an operational amplifier 5. One end of the resistor R5 is connected to a supply voltage VDPA, and the other end is connected to the emitter of the pnp bipolar transistor T3. From the collector of the pnp bipolar transistor T3 flows the current I which is impressed into the circuit arrangement. The positive input of the operational

amplifier 5 is supplied with a reference voltage VREF, and the negative input of the operational amplifier 5 is supplied with the voltage on the emitter of the pnp bipolar transistor T3. The output voltage from the operational amplifier 5 controls the pnp bipolar transistor T3. The collector of the pnp bipolar transistor also has the anode of a diode D1 connected to it. The diode D1 is used to protect the pnp bipolar transistor T3 against destruction by the high voltages of the call signals. The reference voltage VREF can be used to set the current I.

An AC terminal impedance for the analog subscriber line is set digitally by means of an impedance filter 8.

To this end, an AC voltage at the junction point 1 is supplied to the impedance filter 8 via a third capacitor C3 and an analog/digital converter 6 connected downstream. In addition, an AC voltage at the junction point 11 is supplied to the impedance filter 8 via a fourth capacitor C4 and a second analog/digital converter 9 connected downstream. The impedance filter 8, which may be in the form of a digital filter, uses the digital AC signals to calculate a signal required for setting the AC terminal impedance. The signal is converted into an analog voltage by means of a digital/analog converter 7 and is added to the output voltage of the circuit by the adding circuit 4 in order to set the DC operating point 3. The output voltage of the adding circuit 4 is supplied to the analog integrator circuit 2, which subtracts a voltage at the junction point between the n-channel MOSFET T1 and the first resistor R1 from the supplied voltage and integrates the difference voltage.

This circuit arrangement is provided with two different setting paths for setting both the DC operating point and the AC terminal impedance, with the first n-channel MOSFET T1 being used for setting the AC terminal

impedance and the DC operating point. Since a direct current or a DC voltage is blocked on the subscriber line by the first capacitor C1 and the second capacitor C2 in this circuit arrangement, the DC source needs to  
5 impress a current I through the first n-channel MOSFET T1, the first resistor R1, the second resistor R2 and the second n-channel MOSFET T2 in order to set the DC operating point. The DC operating point control circuit 3 and the first n-channel MOSFET T1 are then used to  
10 set the direct current through the load path of the first n-channel MOSFET T1, and hence the DC operating point.

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## Patent Claims

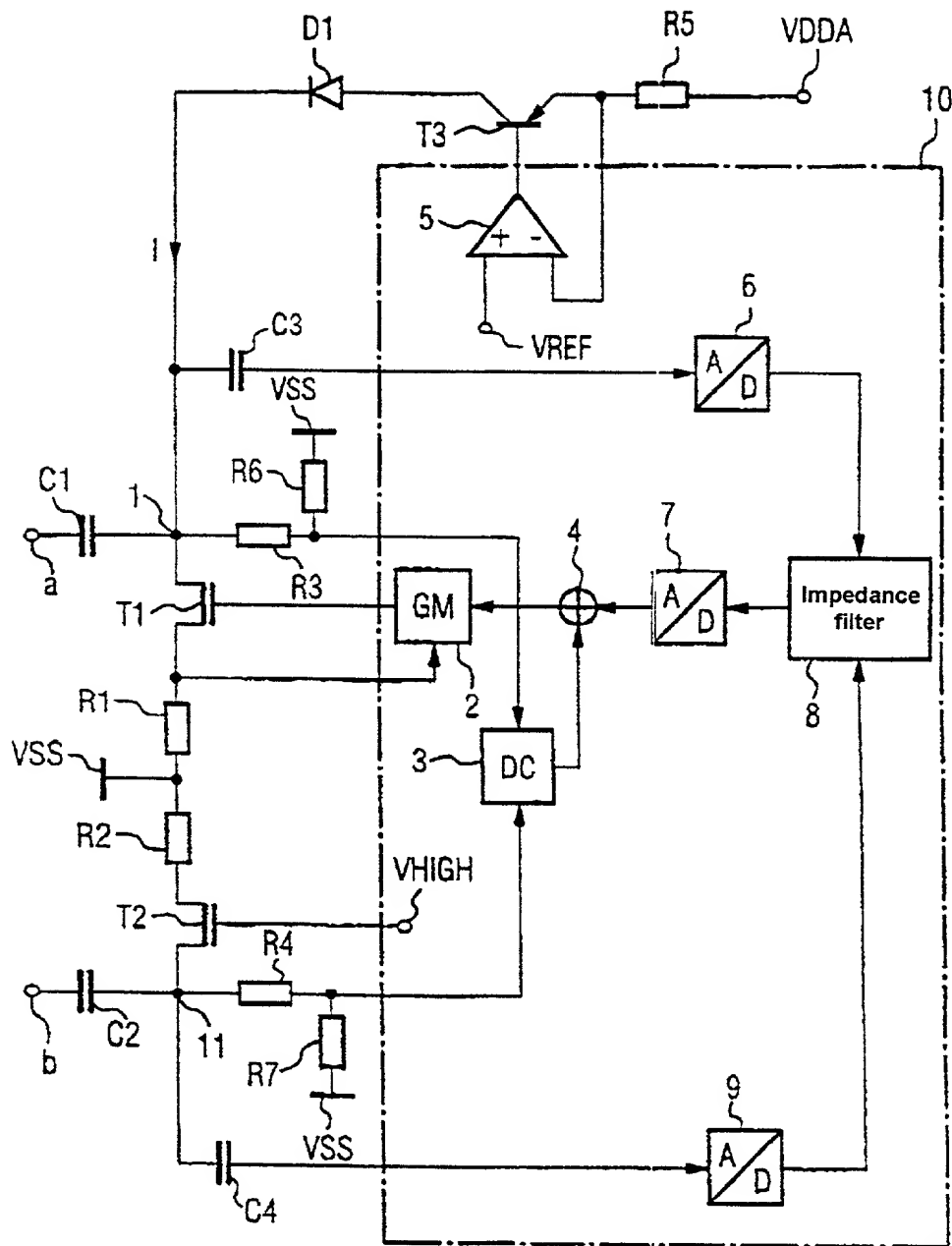
1. A circuit arrangement for forming the termination of an analog subscriber line which has a first connection (a) and a second connection (b) for the subscriber line, and where the first connection (a) is connected to the second connection (b) by means of a series circuit comprising a first capacitor (C1), at least one variable resistor (T1, R1, T2, R2) and a second capacitor (C2), a DC source (T3, R5, VDDA) being connected to the node point (1) between the first capacitor (C1) and the variable resistor (T1, R1).

2. The circuit arrangement as claimed in claim 1, characterized in that the DC source (T3, R5, VDDA) has a transistor (T3) and a resistor (R5), the load path of the transistor being connected in series with the resistor, and the control connection of the transistor being set by a control circuit (5).

3. The circuit arrangement as claimed in claim 2, characterized in that the control circuit has an operational amplifier (5) whose output is connected to the control connection of the transistor (T3) of the DC source, whose negative input is connected to the junction point between the transistor (T3) and the resistor (R5) of the DC source and whose positive input has a reference voltage (VREF) applied to it.

4. The circuit arrangement as claimed in claim 2 or 3, characterized in that the DC source has a diode (D1) which is connected in series with the load path of the transistor (T3).

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# Declaration and Power of Attorney For Utility or Design Patent Application

Erklärung für Patentanmeldungen zur Gebrauchseignung und Entwicklung  
mit Vollmacht

## German Language Declaration

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides  
Statt:

daß mein Wohnsitz, meine Postanschrift und meine Staats-  
angehörigkeit den im nachstehenden nach meinem Namen  
aufgeführten Angaben entsprechen, daß ich nach bestem Wissen der  
ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein  
Name angegeben ist) oder ein ursprünglicher, erster und Miterfinder  
(falls nachstehend mehrere Namen aufgeführt sind) des  
Gegenstandes bin, für den dieser Antrag gestellt wird und für den  
ein Patent für die Erfindung mit folgendem Titel beantragt wird:

Schaltungsanordnung zum Bilden des Abschlusses einer analogen  
Teilnehmerleitung

deren Beschreibung hier beigefügt ist, es sei denn (in diesem Falle  
Zutreffendes bitte ankreuzen), diese Erfindung

☒ wurde angemeldet am January 5, 2000  
unter der US-Anmeldenummer 09/807,993  
und wurde am May 3, 2001 abgeändert (falls zutreffend)  
oder  
unter der PCT internationalen Anmeldungsnummer  
PCT/DE00/00046  
und wurde am \_\_\_\_\_ abgeändert (falls zutreffend).

Ich bestätige hiermit, daß ich den Inhalt der oben angegebene Paten-  
tanmeldung, einschließlich der Ansprüche, die eventuell durch einen  
oben erwähnten Zusatzantrag abgeändert wurde, durchgesehen und  
verstanden habe.

Ich erkenne meine Pflicht zur Offenbarung jeglicher Informationen  
an, die zur Prüfung der Patentfähigkeit in Einklang mit Titel 37,  
Code of Federal Regulations, § 1.56 von Belang sind.

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäß Title  
35, US-Code, § 119 (a)-(d), bzw. § 365(b) aller unten aufgeführten  
Auslandsanmeldungen für Patente oder Erfinderurkunden, oder §  
365(a) aller PCT internationalen Anmeldungen, welche wenigstens  
ein Land ausser den Vereinigten Staaten von Amerika benennen, und  
habe nachstehend durch ankreuzen sämtliche Auslandsanmeldungen  
für Patente bzw. Erfinderurkunden oder PCT internationale  
Anmeldungen angegeben, deren Anmeldetag dem der Anmeldung,  
für welche Priorität beansprucht wird, vorangeht.

### Prior Foreign Applications

Frühere ausländische Anmeldungen

<u>199 01 464. 7</u>	<u>Germany</u>
(Number)	(Country)
(Number)	(Land)
(Number)	(Country)
(Number)	(Land)

☐ Zusätzliche einstweilige Anmeldungsnummern sind im  
Prioritätsanhang aufgeführt.

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated  
below next to my name.

I believe I am the original, first and sole inventor (if only one  
name is listed below) or an original, first and joint inventor (if  
plural names are listed below) of the subject matter which is  
claimed and for which a patent is sought on the invention entitled

Circuit Arrangement for Forming the Termination of an Analog  
Subscriber Line

the specification of which is attached hereto unless the following  
box is checked:

☒ was filed on January 5, 2000 as  
United States Application Number 09/807,993  
and was amended on May 3, 2001 (if applicable)  
or,

PCT International Application Number PCT/DE00/00046  
and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of  
the above identified specification, including the claims, as  
amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material  
to patentability as defined in Title 37, Code of Federal  
Regulations, §1.56.

I hereby claim foreign priority under Title 35, United States Code  
§119 (a-d) or §365(b) of any foreign application(s) for patent or  
inventor's certificate, or §365(a) of any PCT international  
application which designated at least one country other than the  
United States, listed below. I have also identified below, by  
checking the "No" box, any foreign application for patent or  
inventor's certificate, or of any PCT international application  
having a filing date before that of the application on which  
priority is

Priority Claimed  
Prioritätsanspruch

<u>15/January/1999</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(Day/Month/Year Filed)	Yes	No
(Tag/Monat/Jahr der Anmeldung)	Ja	Nein
 	<input type="checkbox"/>	<input type="checkbox"/>
(Day/Month/Year Filed)	Yes	No
(Tag/Monat/Jahr der Anmeldung)	Ja	Nein

☐ Additional foreign application numbers are listed  
on a supplemental priority sheet attached hereto.



## German Language Utility or Design Patent Application Continuation

Ich beanspruche hiermit Prioritätsvorteile unter Title 35, US-Code, § 119(e) aller US-Hilfsanmeldungen wie unten aufgezählt.

(Application Number)  
(Aktenzeichen)

(Application Number)  
(Aktenzeichen)

(Application Number)  
(Aktenzeichen)

- ☐ Zusätzliche einstweilige Anwendungsnummern sind im ergänzenden Prioritätsanhang aufgeführt.

Ich beanspruche hiermit die mir unter Title 35, US-Code, § 120 zustehenden Vorteile aller unten aufgeführten US-Patentanmeldungen bzw. § 365(c) aller PCT internationalen Anmeldungen, welche die Vereinigten Staaten von Amerika benennen, und erkenne, insofern der Gegenstand eines jeden früheren Anspruchs dieser Patentanmeldung nicht in einer US-Patentanmeldung, bzw. PCT internationalen Anmeldung in in einer gemäß dem ersten Absatz von Title 35, US-Code, § 112 vorgeschriebenen Art und Weise offenbart wurde, meine Pflicht zur Offenbarung jeglicher Informationen an, die zur Prüfung der Patentfähigkeit in Einklang mit Title 37, Code of Federal Regulations, § 1.56 von Belang sind und die im Zeitraum zwischen dem Anmeldetag der früheren Patentanmeldung und dem nationalen oder im Rahmen des Vertrags über die Zusammenarbeit auf dem Gebiet des Patentwesens (PCT) gültigen internationalen Anmeldetags bekannt geworden sind.

(Application No.)  
(Aktenzeichen)

(Day/Month/Year Filed)  
(Tag/Monat/Jahr eingereicht)

(Application No.)  
(Aktenzeichen)

(Day/Month/Year Filed)  
(Tag/Monat/Jahr eingereicht)

- ☐ Zusätzliche USA oder internationale Anwendungsnummern sind im ergänzenden Prioritätsanhang aufgeführt.

Ich erkläre hiermit, daß alle in der vorliegenden Erklärung von mir gemachte Angaben nach bestem Wissen und Gewissen der Wahrheit entsprechen, und ferner daß ich diese eidesstattliche Erklärung in Kenntnis dessen ablege, daß wissentlich und vorsätzlich falsche Angaben oder dergleichen gemäß § 1001, Title 18 des US-Code strafbar sind und mit Geldstrafe und/oder Gefängnis bestraft werden können und daß derartige wissentlich und vorsätzlich falsche Angaben die Rechtswirksamkeit der vorliegenden Patentanmeldung oder eines aufgrund deren erteilten Patentes gefährden können.

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I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

(Day/Month/Year Filed)  
(Tag/Monat/Jahr der Anmeldung)

(Day/Month/Year Filed)  
(Tag/Monat/Jahr der Anmeldung)

(Day/Month/Year Filed)  
(Tag/Monat/Jahr der Anmeldung)

- ☐ Additional provisional application numbers are listed on a supplemental priority sheet attached hereto.

I hereby claim the benefit under Title 35, United States Code §120 of any United States application(s), or §365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

(Status)  
(patentiert, schwebend, aufgegeben)  
(patented, pending, abandoned)

(Status)  
(patentiert, schwebend, aufgegeben)  
(patented, pending, abandoned)

- ☐ Additional U.S. or international application numbers are listed on a supplemental priority sheet attached hereto.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

The undersigned hereby authorizes the U.S. attorney or agent named herein to accept and follow instructions from either his foreign patent agent or corporate representative, if any, as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorney or agent and the undersigned. In the event of a change in the persons from whom instructions may be taken, the U.S. attorney or agent named herein will be so notified by the undersigned.

## German Language Utility or Design Patent Application Declaration

**VERTRETUNGSVOLLMACHT:** Als benannter Erfinder beauftrage ich hiermit den sich mit der Kundennummer befassenden Patentanwalt (Patentanwälte) und/oder Patent-Agenten mit der Verfolgung der vorliegenden Patentanmeldung sowie mit der Abwicklung aller damit verbundenen Geschäfte vor dem Patent- und Warenzeichenamt und weise an, dass alle Korrespondenz mit dieser Kundennummer adressiert wird.

**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the attorney(s) and/or agent(s) associated with the Customer Number provided below to prosecute this application and transact all business in the Patent and Trademark Office connected therewith, and direct that all correspondence be addressed to that Customer Number:

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